

Listing of Claims

1. ~ 30. (Canceled)

31. (New) A liquid crystal display device, comprising:

a non-rubbed SiC_x alignment layer comprising constituent silicon and carbon materials;

and

liquid crystal material disposed in contact with the non-rubbed SiC_x alignment layer,

wherein the constituent materials of the non-rubbed SiC_x alignment layer have a predetermined stoichiometric relationship that imparts a predetermined pretilt angle to the liquid crystal material based on an amount, x , of the constituent carbon material.

32. (New) The liquid crystal display device of claim 31, wherein the non-rubbed SiC_x alignment layer imparts a pretilt angle in a range of about 4 to about 5 degrees when x is set to about 2.

33. (New) The liquid crystal display device of claim 31, wherein the non-rubbed SiC_x alignment layer imparts a pretilt angle in a range of about 0.5 to about 1 degree when x is set to about 1.5.

34. (New) A liquid crystal display device, comprising:

a non-rubbed SiO_yN_z alignment layer comprising constituent silicon, oxygen and nitrogen materials; and

liquid crystal material disposed in contact with the non-rubbed SiO_yN_z alignment layer.

wherein the constituent materials of the non-rubbed SiO_xN_z alignment layer have a predetermined stoichiometric relationship that imparts a predetermined pretilt angle to the liquid crystal material based on amounts, y and z , of the respective constituent oxygen and nitrogen materials.

35. (New) The liquid crystal display device of claim 31, wherein the non-rubbed SiO_xN_z alignment layer imparts a pretilt angle in a range of about 0 to about 1 degree by adjusting y and z .